

Claims

We claim:

1. In a wireless communication system with an air interface comprising a plurality of bursts, a method comprising the step of defining a plurality of bursts,
5 wherein each burst comprises a field embedded within the burst; and wherein the field is one of a synchronization field and a signaling field; and
wherein, when the field is a synchronization field, defining a position of at least one subsequent burst comprising the signaling field, and defining a position
10 of at least one subsequent burst comprising the synchronization field.
2. The method of claim 1 wherein the signaling field carries non-voice information.
15
3. The method of claim 1 wherein each burst comprising the signaling field comprises one of a link control signaling, and an encryption parameter.
4. The method of claim 1 wherein at least one burst comprising the signaling
20 field carries link control signaling and framing information for the link control signaling.
5. The method of claim 4 wherein an encryption parameter is carried in one of the bursts comprising the signaling field, and wherein a receiving device of the plurality of bursts knows a location of the burst carrying the encryption parameter
25 *a priori*.
6. The method of claim 4 wherein, when the field is a signaling field, defining an indicator to identify that payload in a burst begins a new packet.
30

7. The method of claim 4 wherein, when the field is a signaling field, defining an indicator to identify that payload in a burst completes a packet.

8. The method of claim 4 wherein, when the field is a signaling field,
5 defining an indicator to identify that payload in a burst does not begin or complete a packet.

9. The method of claim 4 wherein the link control signaling is formed into a matrix, having rows and columns, prior to forward error correction encoding,
10 wherein the rows of the matrix are encoded with a block code, and wherein the columns of the matrix are encoded with a parity checksum.

10. The method of claim 9 wherein the block code is a Hamming(16, 11) code.

15 11. The method of claim 1 wherein an encryption parameter is carried in one of the bursts comprising the signaling field, and wherein a receiving device of the plurality of bursts knows a location of the burst carrying the encryption parameter *a priori*.

20 12. In a wireless communication system with an air interface comprising a plurality of bursts, a method comprising the steps of:

receiving a burst comprising a field embedded within the burst;
determining whether the field is one of a synchronization field and a
25 signaling field; and

when the field is determined to be the synchronization field, identifying a position of at least one subsequent burst comprising the signaling field, and identifying at least one subsequent burst comprising the synchronization field.

30 13. The method of claim 12 further comprising the steps of:

receiving a burst comprising payload and a synchronization field, wherein the synchronization field comprises a synchronization pattern;

comparing the received synchronization pattern against a first known synchronization pattern and a second known synchronization pattern;

5 if the received synchronization pattern is substantially similar to the first known synchronization pattern, processing the payload as voice; and

if the received synchronization pattern is substantially similar to the second known synchronization pattern, processing the payload as non-voice.

10 14. The method of claim 13 wherein the first known synchronization pattern and the second known synchronization pattern are complements of each other.

15 15. The method of claim 12 further comprising the steps of:

receiving a burst comprising payload and a synchronization field, wherein the synchronization field comprises a synchronization pattern;

selecting a target synchronization pattern dependent on an operating mode;

comparing the received synchronization pattern against the target synchronization pattern; and

20 if the received synchronization pattern is substantially similar to the target synchronization pattern, processing the payload; otherwise, discarding the burst.

16. The method of claim 15 wherein the operating mode is the expectation of one of an inbound channel, outbound channel, forward channel, reverse channel, subscriber transmission, base station transmission, repeated transmission, and
25 non-repeated transmission.

17. The method of claim 12 further comprising the steps of:
receiving a synchronization field, wherein the synchronization field
comprises a synchronization pattern;
comparing the received synchronization pattern against a first known
5 synchronization pattern and a second known synchronization pattern, wherein the
first and second known synchronization patterns have a common length;
if the received synchronization pattern is substantially similar to the first
known synchronization pattern, selecting a first operating mode; and
if the received synchronization pattern is substantially similar to the
10 second known synchronization pattern, selecting a second operating mode.
18. The method of claim 17 wherein the first known synchronization pattern is
defined by a synchronization pattern defined in ANSI.102.BAAA.
- 15 19. The method of claim 12 wherein at least one burst comprising the
signaling field carries link control signaling and framing information for the link
control signaling.
20. The method of claim 19 wherein an encryption parameter is carried in one
20 of the bursts comprising the signaling field, and wherein a receiving device of the
plurality of bursts knows a location of the burst carrying the encryption parameter
a priori.
21. The method of claim 12 wherein an encryption parameter is carried in one
25 of the bursts comprising the signaling field, and wherein a receiving device of the
plurality of bursts knows a location of the burst carrying the encryption parameter
a priori.

22. The method of claim 12 further comprising the steps of:
- when a burst comprising the signaling field is expected to be received,
 - comparing a pattern in the signaling field against a known synchronization pattern, and
 - 5 if the pattern in the signaling field is substantially similar to the known synchronization pattern, setting at least one of a set of operating parameters and an operating mode based on the known synchronization pattern.